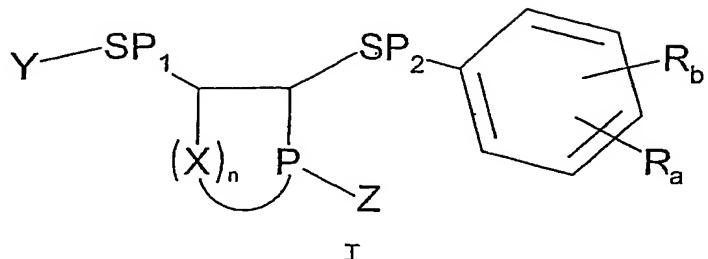


Claims

1. A compound according to formula I



wherein

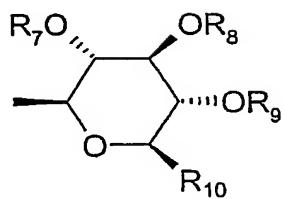
P represents -N< or -C=,

X represents independently of each other -CH<sub>2</sub>-, CR<sub>1</sub> (sp<sub>2</sub>-hybridised), O, -NH-, =N-, -CO- or -CS-, wherein R<sub>1</sub> represents H or NR<sub>2</sub>, wherein R<sub>2</sub> represents H or lower alkyl, which optionally is linked to Z such that a bicyclic structure is formed;

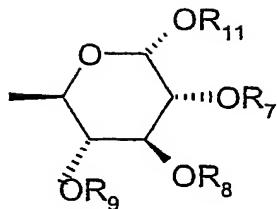
n represents 1 or 2,

R<sub>a</sub> represents H, lower alkyl, -OR<sub>3</sub>, -O(CO)R<sub>3</sub>, -O(CO)OR<sub>3</sub>, -O(CO)NR<sub>3</sub>R<sub>4</sub>, -NR<sub>3</sub>R<sub>4</sub>, -NR<sub>3</sub>(CO)R<sub>4</sub>, -COOR<sub>3</sub>, -CONR<sub>3</sub>R<sub>4</sub>, -CH=CHCOOR<sub>3</sub>, -CF<sub>3</sub>, -CN, -NO<sub>2</sub>, SO<sub>3</sub>H, PO<sub>3</sub>H or halogen, wherein R<sub>3</sub> and R<sub>4</sub> represent H or lower alkyl,

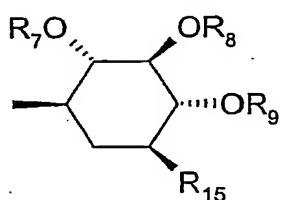
R<sub>b</sub> represents H, OH, -OSO<sub>2</sub>Me, -OSO<sub>2</sub>W wherein W represents optionally substituted aryl or heteroaryl, -OCO(CHOH)<sub>2</sub>COOR<sub>5</sub> wherein R<sub>5</sub> represents H or lower alkyl; or represents the formula -Sp<sub>3</sub>-R<sub>6</sub>, wherein Sp<sub>3</sub> represents a covalent bond, -O-, -OCH<sub>2</sub>-, -OSO<sub>2</sub>CH<sub>2</sub>-, -OSO<sub>2</sub>-, -OSO<sub>2</sub>-(p)C<sub>6</sub>H<sub>4</sub>O- and R<sub>6</sub> represents one of carbohydrate structures A-D:



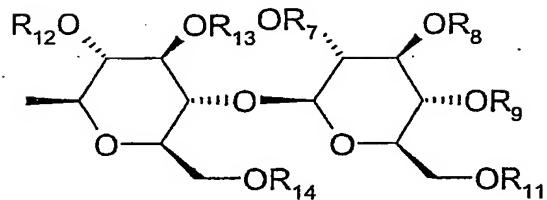
A



B



C



D

wherein

R<sub>7</sub>, R<sub>8</sub>, R<sub>9</sub>, R<sub>11</sub>, R<sub>12</sub>, R<sub>13</sub> and R<sub>14</sub> represent independently of each other H, lower alkyl, aryl(lower alkyl), -CO-lower alkyl, -CO-aryl, -SO<sub>3</sub><sup>-</sup> or -PO<sub>3</sub><sup>-</sup>,

R<sub>10</sub> represents -CH<sub>2</sub>OR<sub>16</sub> or -COOR<sub>17</sub>, and

R<sub>15</sub> represents -CH<sub>2</sub>OR<sub>16</sub>, -COOR<sub>17</sub>, -CH<sub>2</sub>NH<sub>2</sub>, -CH<sub>2</sub>OPPO<sub>3</sub><sup>-</sup> or -CH<sub>2</sub>OSO<sub>3</sub><sup>-</sup>, wherein R<sub>16</sub> and R<sub>17</sub> independently of each other represent H, lower alkyl, aryl(lower alkyl), -CO-lower alkyl, -CO-aryl, -SO<sub>3</sub><sup>-</sup> or -PO<sub>3</sub><sup>-</sup>,

Z represents optionally substituted aryl or heteroaryl,

Sp<sub>1</sub> represents a spacer unit, such as a straight-chain or branched lower alkyl group -(CH<sub>2</sub>)<sub>p</sub>-, wherein p is from 2-6, which is unsubstituted, mono or poly-substituted by -OH, -OR<sub>18</sub>, halogen or cyano group, wherein one or more -CH<sub>2</sub>- groups may independently be replaced by -O-, -CO-, -CO-O-, -O-CO-, -NR<sub>19</sub>-, -NR<sub>19</sub>-CO-, -CO-NR<sub>19</sub>-, -CH=CH-, -C≡C- and wherein R<sub>18</sub> and R<sub>19</sub> represent a hydrogen atom or lower alkyl;

Sp<sub>2</sub> represents an optional spacer unit, such as a covalent bond or a straight-chain or branched lower alkyl group -

$(\text{CH}_2)_q-$ , wherein q is from 1-6, which is unsubstituted, mono or poly-substituted by -OH, -OR<sub>20</sub>, halogen or cyano group, wherein one or more -CH<sub>2</sub>- groups may independently be replaced by -O-, -CO-, -CO-O-, -O-CO-, -NR<sub>21</sub>-, -NR<sub>21</sub>-CO-, -CO-NR<sub>21</sub>-, -CH=CH-, -C≡C- and wherein R<sub>20</sub> and R<sub>21</sub> represents a hydrogen atom or lower alkyl;

Y represents optionally substituted aryl or heteroaryl,

with the proviso, that if P = -N<, n=1, X = -CO- and Sp<sub>2</sub> represents a covalent bond, R<sub>6</sub> may not represent carbohydrate structures A or D for Sp<sub>3</sub> = -O- and R<sub>6</sub> may not represent carbohydrate B for Sp<sub>3</sub> = -OCH<sub>2</sub>-.

2. A compound according to claim 1,

with the proviso, that if P = -N<, n=1, X = -CO- and Sp<sub>2</sub> represents a covalent bond, R<sub>b</sub> may not represent H or OH and Sp<sub>3</sub> may not represent a covalent bond, -O- or -OCH<sub>2</sub>-.

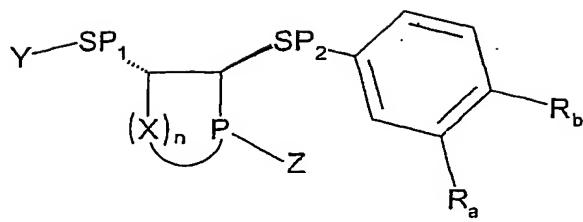
3. A compound according to claims 1 or 2 wherein P = -N<, n = 1 and X = -CO-, -CS-, -CH<sub>2</sub>- or -NH-.

4. A compound according to claims 1 or 2 wherein P = -N<, n = 1 and X = -CS-, -CH<sub>2</sub>- or -NH-.

5. A compound according to claims 1 or 2 wherein P = -N< and -(X)<sub>n</sub>- = -OOC-, -COO-, -CONH-, -CH=N-.

6. A compound according to claims 1 or 2 wherein P = -C= and -(X)<sub>n</sub>- = -NH-N= or -O-N=.

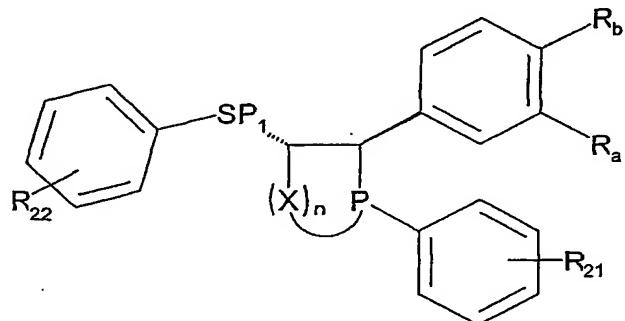
7. A compound according to claims 1 or 2 having the formula IVa



IVa

wherein  $R_a$ ,  $R_b$ ,  $Sp_1$ ,  $Sp_2$ ,  $P$ ,  $X$ ,  $Y$ ,  $Z$  and  $n$  are as defined in claims 1 or 2.

8. A compound according to claims 1 or 2 having the formula IVb,



IVb

wherein  $R_a$ ,  $R_b$ ,  $Sp_1$ ,  $P$ ,  $X$  and  $n$  are as defined hereinabove and wherein  $R_{21}$  and  $R_{22}$  represent H, lower alkyl, lower alkoxy or halogen.

9. A compound according to claims 7 or 8 wherein  $P = -N<$ ,  $n = 1$  and  $X = -CO-$ ,  $-CS-$ ,  $-CH_2-$  or  $-NH-$ .

10. A compound according to claims 7 or 8 wherein  $P = -N<$ ,  $n = 1$  and  $X = -CS-$ ,  $-CH_2-$  or  $-NH-$ .

11. A compound according to claims 7 or 8 wherein  $P = -N<$  and  $-(X)_n- = -OOC-$ ,  $-COO-$ ,  $-CONH-$ ,  $-CH=N-$ .

12. A compound according to claims 7 or 8 wherein  $P = -C=$  and  $-(X)_n- = -NH-N=$  or  $-O-N=$ .

13. A pharmaceutical composition comprising a therapeutically

effective amount of a compound of any preceding claim with a pharmaceutically acceptable carrier.

14. A pharmaceutical composition according to claim 13 for the treatment or prevention of arteriosclerosis or for the reduction of cholesterol levels.
15. A kit comprising a pharmaceutical composition according to claim 13 for use in the treatment or prevention of arteriosclerosis or for the reduction of cholesterol levels.
16. A method for the treatment or prevention of arteriosclerosis or for the reduction of cholesterol levels comprising administering to a subject in need of such treatment an effective amount of a compound according to claims 1 to 12.
17. Use of a compound according to claims 1 to 12 for the manufacture of a medicament for the treatment or prevention of arteriosclerosis or for the reduction of cholesterol levels.